112-1-1419

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957,
Nr 1, p.215 (USSR)

AUTHOR: Ganz, S.N.

TITLE: Automatic Control of Centrifugation Operations
            (Avtomaticheskoye upravleniye protsessom tsentri-
            fugirovaniya)

PERIODICAL: Tr. Dnepropetr. khim.-tekhnol. in-t, 1955, Nr 4,
            pp.186-190

ABSTRACT: Bibliographic entry

Card 1/1

AID P - 2259

Subject   : USSR/Chemistry

Card 1/1   Pub. 152 - 4/19

Authors   : Ganz, S. N. and S. B. Kravchinskaya

Title   : Rate of absorption of nitrogen oxides by solutions of
              Ca(OH)$_2$ in mechanical absorption apparatus with a large
              number of revolutions.

Periodical: Zhur. prikl. khim., 28, no.2, 145-155, 1955

Abstract   : The absorption was conducted in three types of apparatus
              the characteristics of which are presented in a table.
              The degree of absorption of nitrogen oxides increases
              markedly with increase in the number of revolutions.
              The calculations show a saving of 61.4% in energy when
              mechanical absorption apparatus are used. Four tables,
              7 illustrations, 6 references (all Russian: 1949-1955).

Institution: Dnepropetrovsk Institute of Chemical Technology

Submitted : Jl 20, 1953

GANZ, S. N.

		AID P - 3489

Subject   : USSR/Chemistry

Card 1/1   Pub. 152 - 4/21

Authors   : Ganz, S. N. and S. I. Kapturova

Title   : Kinetics of formation of nitric acid in mechanical
               absorbers with a large number of revolutions

Periodical : Zhur. prikl. khim., 28, 6, 585-596, 1955

Abstract   : In mechanical absorbers with a large number of revo-
               lutions the gas is thoroughly mixed with the liquid,
               and the oxidation of NO to NO_2 proceeds at a higher
               rate. Two tables, 13 diagrams, 12 references, all
               Russian (1900-1953).

Institution : None

Submitted   : N 4, 1953

AID P - 3726

Subject   : USSR/Chemistry

Card 1/2   Pub. 152 - 6/16

Authors   : Ganz, S. N., M. A. Lokshin, and S. I. Kapturova

Title   : Determination of the coefficients of the absorption
                rate of nitrogen oxides by aqueous solutions of
                nitric acid in mechanical absorbers. Part II.

Periodical   : Zhur. prikl. khim. 28, 8, 831-840, 1955

Abstract   : The coefficient of the absorption rate is a function
                of peripheral speed of the discs, temperature,
                concentration of nitrogen oxides in the gas, and the
                concentration of nitric acid. By using the formulas
                given in the article, accurate rates are obtained for
                the following conditions: temperatures ranging from
                $10-70^\circ C$, nitric acid solutions of 5-40%, and nitrogen
                oxide concentrations of 1-9%. Seven tables, 5 diagrams,
                18 references, 13 Russian (1934-1953).

Zhur. prikl. khim. 28, 8, 831-840, 1955

AID P - 3726

Card 2/2   Pub. 152 - 6/16

Institution : None

Submitted   : N 4, 1953

AID P - 3919

Subject   : USSR/Chemistry

Card 1/1   Pub. 152 - 2/19

Author   : Ganz, S. N.

Title   : Mechanism of oxidation of nitric oxide and of formation
               of nitric acid under high-eddy conditions.

Periodical : Zhur. prikl. khim. 28, 10, 1037-48, 1955

Abstract   : The effect of various factors on the oxidation of
               nitric oxide is discussed, namely: eddy, concentration
               of NO in the gas, solubility of oxygen, concentration
               of nitric acid, surface of the phase contact. The
               oxidation of nitric oxide is a heterogeneous-homogeneous
               process. The greater the surface of the phase contact,
               the greater is the rate of oxidation of NO. Five tables,
               4 diagrams, 24 references, 13 Russian (1901-55).

Institution : None

Submitted   : D 10, 1953

GANZ, S.N.

Absorption kinetics of nitrogen oxides by sulfuric acid in
rotating absorbers with high rpm. Zhur.prikl.khim. 29 no.7:
1018-1028 Jl '57.   (MIRA 10:10)
        (Absorption) (Nitrogen oxides) (Sulfuric acid)

GANZ, S.N.

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Kinetics of film absorption of nitric oxide by ferrous sulfate. S. N. Ganz and L. I. Mamon (Chem.-Technol. Inst., Dnepropetrovsk). Zhur. Priklad. Khim. 30, 800-70(1957). — The rate of absorption q, kg./sq. m. hr., of NO by solns. of $FeSO_4$ was detd. (a) by passing a current of gas over a stationary surface (50 sq. cm.) with the soln. stirred below the surface and (b) in a packed tower. In method a with NO from 0.7 to 13.6% the value of q in 20.5% $FeSO_4$ at 20° was proportional to the partial pressure P of NO. The same was true with a gas contg. from 2.2 to 12% NO in a soln. of 4.0-20% $FeSO_4$. The over-all coeff. of absorption K was const. ($= q/\Delta P$) at 0.5 kg./sq. m. hr. atm. However, in a series of expts. with solns. contg. from 5.6 to 20.5% $FeSO_4$ the linearity between q and P held only up to specific relations: up to 5% $FeSO_4$ for an 8% gas, 9.7% $FeSO_4$ for a 16% gas, and 20.5% $FeSO_4$ for a 14% gas. Beyond the point of linearity the relation $q = K$ ($n + P$) held (cf. Pozin, C.A. 42, 4420c). The process was accompanied by a chem. reaction and its rate was controlled by diffusional kinetics. In method c the absorption of a 1% NO gas in a packed tower by a 20% $FeSO_4$ soln. was interpreted on the assumption that the over-all coeff. of absorption K_y could be calcd. from Nusselt's criteria $Nu_y = CRe^aPr^bG^c$. Since Pr and G under the exptl. conditions were const. and $C = 0.5$ $K_y = C_1Re^a = C_2^{0.8}$. The function Nu_y vs. log Re_y was a straight line expressed by $Nu_y = 0.18Re^{0.8}Pr^{0.33}$. Cf. C.A. 51, 10528b.

GANZ, S. N.

Kinetics of absorption of nitric oxide by solutions of ferrous sulfate in a mechanical absorber with a high number of revolutions. S. N. Ganz and L. I. Mamon. Zhur. Priklad. Khim. 30, ...61(1957); cf. ibid 369-79.— The rate of absorption q of NO by aq. solns. of $FeSO_4$ in a revolving absorber similar to that described previously (C.A. 50, 341) was studied. The over-all coeff. of absorption K_v was a function of the r.p.m., n, or the peripheral velocity v_4 of the disks up to a crit. value of $n = 3000$ r.p.m. or $v_4 = 0.6$ m./sec. at which point K_v passed through a max. and then decreased (max. $K_v \approx 1050$ kg./cu. m. hr. atm.). The decrease was attributed to the centrifugal force or to the destruction of the structure of the foam at high velocities. Up to the crit. value of v_4, log K_v vs. v_4 was a linear function expressed by $K_v = 276v_4^{A15}$ and K_v was independent of the partial pressure P of NO and the concn.

of $FeSO_4$. q was proportional to P, so that $q = K_v\Delta P_{a.v.}$. Let K_v was a linear function of the vol. velocity of the gas up to $w \sim 1000$ cu. m./cu. m. hr. In the range of linearity $K_v = Aw^{0.6}$; the values of A for v_4 2.05, 6.28, and 10.25 m./sec. were 2.57, 5.3, and 3.89, resp. I. R.

Intensification of the process of oxidation of nitric oxide in a highly turbulent condition. S. N. Ganz (Chem.-Technol. Inst., Dnepropetrovsk). *Zhur. Priklad. Khim.* 30, 680-97(1957); cf. C.A. 49, 34i, 6840h.—The rate of oxidation α of NO in a revolving absorber is greater than the theoretical, calcd. on the assumption of a 3rd-order reaction. This was more quantitatively confirmed by the following expts. NO diid. to 20% with N was added to air at the entrance of the absorber so that the time of contact was well-defined. The gas velocity was kept const. at 350-400 cu.m./cu.m.hr.; at this rate NO_2 was completely absorbed in a 2% soln. of KI. At 23-24° with KI soln. as an absorption medium and the absorber revolving at 300, 1600, 2200, and 3000 r.p.m., n, the corresponding values of α were 33.6, 39, 49.5, and 58%, resp.; the theoretical $\approx$ 33%. With distd. H_2O as the absorption medium the degree of conversion x_2 to HNO_3 + HNO_2 and x_2' to HNO_3 were linear functions, $x_2 = 0.0133n$ + 15 and $x_2' = 0.001n$ + 15.5. At the resp. values of n the values of x_2 were 19.0, 35.1, 43.5, and 64%, of which the proportion of x_2' was 72.6, 50, 40.2, and 34.2%, resp. The rate of conversion to HNO_3 increased more rapidly than that to HNO_2, because of the reaction $3HNO_2 \rightarrow HNO_3 + 2NO + H_2O$. The initial high value of x_2' was due to the absorption $(NO.NO_2) + H_2O \rightarrow 3HNO_3$. From the above values of x_2 and x_2', $\alpha = 0.01635$ n + 10 increasing from 19.0 at n = 300 to 64% at n = 3000; theoretical α = 28%. With a 8% soln. of $Ca(OH)_2$ as the absorption medium the increase of x_3 with n was not linear. At n = 400 the amt. of $Ca(NO_3)_2$ formed was equal to the theoretical (28%). x_3' increased less rapidly than did x_3 and at n = 1300-1500 the reaction was represented by $4NO_2 + 2Ca(OH)_2 \rightarrow Ca(NO_3)_2 + Ca(NO_2)_2 + 2H_2O$. Above n = 3200-4000 the reaction became stabilized and $d\alpha/dn$ approached zero. I. Bencowitz

Ganz, S. N.

Effect of hydrodynamic condition on the rate of absorption of nitrogen oxides by solutions of calcium hydroxide in a mechanical absorber on a semiplant scale. I. S.

Ganz (Chem.-Technol. Inst., Dnepropetrovsk). Zhur. Priklad. Khim. 30. 1311-20(1957); cf. C.A. 49, 13053.-- The study made previously with a lab. unit was extended to a unit 0.88 m. diam., 1.54 m. long, and 1 cu.m. capacity with 4 perforated disks with 14 spadelike bends in each. With a gas velocity w of 400 cu.m./cu.m. of absorber/hr. through a soln. contg. nitrites X nitrates 10-20, CaO 70-80 g./l., the degree of absorption α at 60-70° increased with the peripheral velocity v_c rather rapidly at first but at decreasing rates so that at $v_c = 22$-23 m./sec. $d\alpha/dv_c$ was small and at $v_c = 27$-28 m./sec. approached zero. In the range of initial gas concn. x_1 from 0.14 to 4% (NO-NO$_2$), α increased with x_1; even with a dil. gas, 0.14-0.3%, $\alpha = 70$-75%, which was higher than could be obtained in a packed tower. By means of the method described previously (C.A. 50, 3857b), equations were found for the coeff. of absorption $K = f(x_1, v_c)$ in the v_c range of 14-30 m./sec. The generalized form of the equation was $K = m\sqrt{v_c} + n$. From a series of simultaneous equations of 2 points on each curve of the functions $m(n) = f(x_1)$, the following empirical relation was obtained $K_c = (1400 - 241x^{-1})v_c^{0.13} + (500x_1^{-1} - 2080)$. $K = f(w)$ was empirically expressed by $K = aw + b$ with values of 1.9 and 2.3 for the consts. a and b, resp. The calcd. values of K agreed with the exptl. values within 1.5%. α increased linearly with the vol. of liquor in the absorber or the ratio V of vol. of liquor/vol. absorber. At $V = 0.19$-0.21 α passed through a max. and decreased. Best results were obtained with 4 disks spaced 0.6-0.7 disk diams. with 14-16 spades bent at 15-17°.

I. Benowitz

GANZ, S. N.

Effect of basic physicochemical factors on the rate of absorption of nitrogen oxides by solutions of Ca(OH)₂ in a rapidly revolving absorber. II. S. N. Ganz and M. A. Lokshin (Chem. Technol. Inst., Dnepropetrovsk). *Zhur. Priklad. Khim.* 30, 1525-35(1957); cf. *C.A.* 52, 2473a.— The degree of absorption α of $NO + NO_2$ by solns. of Ca-(OH)₂ in a revolving absorber (*loc. cit.*) decreased as the concn. C of Ca(NO₃)₂ + Ca(NO₂)₂ increased. Empirically, the coeff. of absorption $K_s = mC^n$, kg./cu. m. hr. atm. For initial concns. x of $NO + NO_2$ (60% of NO oxidized) from 0.475 to 2.125%, CaO concns. from 3 to 5 g./l., periph-eral velocity V_p of 23 m./sec., gas velocity w of 400 cu. m./cu. m. hr. at 60-70°, $m = 4400x + 400$ and $n = -(0.13x + 0.24)$. The calcd. K_s agreed with the exptl. values within ±2-3%. The effect of the degree of oxidation of NO to NO_2, q, on α was detd. at 30-45° with solns. contg. CaO 4-8 g./l., $C = 200$-50 g./l., at $V_p = 23$, and $w = 300$-20. With $x = 3.2\%$, α increased from 69.8 to 82.1% as q in-creased from 30 to 70%; the N oxide content in the exit gases decreased from 0.371 to 0.258%. With $x = 0.6\%$ α increased from 63 to 73.2% as q increased from 32 to 68% and the concn. of N oxides in the exit gases decreased from 0.228 to 0.172%. The kinetics of the reaction was studied by the change in C of the partially recirculated soln. The results indicated that in a revolving absorber the rate of absorption of N_2O_3 and NO_2 were practically equal; this is attributed to the reactions $N_2O_3 + Ca(OH)_2 = Ca(NO_2)_2 + H_2O$ and $Ca(NO_2)_2 + 2NO_2 = Ca(NO_3)_2 + 2NO$.

I. Bencowitz..

Distr: 4E4J

Generalized principles of absorption processes in a rapidly revolving absorber. S. N. Gang (Chem. Technol. Inst., Dnepropetrovsk). Zhur. Priklad. Khim. 30, 1604-14 (1957); cf. C.A. 52, 5103i.—Empirical relations previously obtained with rapidly revolving absorbers are reëxamd. The plots of the rate of absorption α vs. the peripheral velocity V pass through flat max. beyond which α decreases at first and then tends to become parallel to the V axis., i.e. α becomes independent of V. In the initial range of $V_0 - V_1$ ($V_1 = 1-5$ m./sec.), α is a function of the gas and absorbent concns. In the range $V_1 - V_2$, α rises very rapidly and the process is controlled primarily by the soly. of the gases in the absorbent. In the $V_2 - V_3$ range (max. α), the turbulence of the soln. as well as that of the gas is the controlling factor. As V increases to V_4 and beyond, the droplets begin to coalesce, the foam breaks, and the liquid is held centrifugally against the revolving cylinder. The α vs. V curves are similar to the power function of a similar revolving cylinder, so that up to the max. the coeff. of absorption is a function of the power requirement. Most economical results are obtained with a linear gas velocity of 0.7-2.5 m./sec., a length to diam. ratio of 2.2-3, and a liquid vol. of not more than 20-25% of the absorber vol. Addnl. specifications were given previously (loc. cit.).   L. B.

GANZ, S. N.: Doc Tech Sci (diss) -- "Investigation of the kinetics of absorp-

tion of the oxides of nitrogen by solution of HNO_3, H_2SO_4, $Ca(OH)_2$, and $FeSO_4$

in mechanical absorbers with high rotary speeds". Leningrad-Dnepropetrovsk,

1958. 21 pp (Min Higher Educ USSR, Leningrad Order of Labor Red Banner Techno-

logical Inst im Leningrad Soviet) 200 copies (KL, No 1, 1959, 118)

GANZ, S.N.

Absorption of nitrogen oxides with solid absorbents. Zhur. prikl.
khim. 31 no.1:138-140 Ja '58.   (MIRA 11:4)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
         (Absorption) (Nitrogen oxides)

GANZ, S.N.; LOKSHIN, M.A.

Making the coke-oven gas purification from hydrogen sulfide by
high revolution rotary absorbent more efficient. Zhur. prikl.
khim. 31 no.2:191-197 F '58.   (MIRA 11:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni
F.E. Dzerzhinskogo.
          (Coke-oven gas)   (Hydrogen sulfide)   (Absorption)

GANZ, S.N.

Adsorption of nitrogen oxides by aluminum silicate sorbents.
Zhur.prikl. khim. 31 no.3:360-368 Mr '58.   (MIRA 11:4)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
         (Adsorption) (Nitrogen oxides) (Aluminum silicate)

SOV/68-59-1-10/26

AUTHORS: Lokshin, M.A. and Ganz, S.N.

TITLE: Intensification of the Process of Regeneration of a
           Sodium-arsenical Solution Under Highly Turbulent
           Conditions (Intensifikatsiya protsessa regeneratsii
           mysh'yakovo-sodovogo rastvora v usloviyakh vysoko-
           turbulentnogo rezhima)

PERIODICAL: Koks i Khimiya, 1959, Nr 1, pp 37 - 41 (USSR)

ABSTRACT: The influence of the degree of turbulency of the system
           on the velocity of regeneration of the absorption
           solution ($2Na_3AsS_4 + O_2 = 2Na_2AsS_3O + 2S$) was

           investigated. The investigation was carried out on a
           large-scale laboratory installation (Figure 1). The
           reaction was carried out in a rotational regenerator with
           propeller discs set on a shaft (in Figure 1). The
           influence of the peripheral velocity of the discs on the
           velocity regeneration was carried out under the following
           standard conditions: volume velocity of air (w)
           100 m^3/m^3 of the volume of regenerator per hour, pH 7.5,
           As_2O_3 15.09 g/litre, Na_2CO_3 15.64 g/litre, t = 30 °C.

           The volume of the liquid in the regenerator amounted to

Card1/3

Intensification of the Process of Regeneration of a Sodium- SOV/68-59-1-10/26
arsenical Solution Under Highly Turbulent Conditions

35% of the volume of the apparatus. Two series of
experiments were made with regeneration time of 3 and 5 min.
In each series the number of revolutions of the shaft
varied from 0 to 1 400 rpm which corresponded to the
variation in the peripheral velocity of discs (Vd) from
0 to 6 m/sec. The results are shown in Figure 2. The
influence of the time of regeneration, i.e. contact time
between liquid and gaseous phases was additonally tested
at Vd = 5.15 m/sec (1 200 rpm), t = 48 °C, pH = 7.3
and W = 100-110 m^3/m^3 hour using air and oxygen. It was
found that in comparison with present industrial
regeneration velocity, the process can be speeded up 12.5 –
20 times when using air and 33.4 – 53.4 times when using
oxygen (Figure 3). The influence of the volume velocity
of air was tested under the following conditions:
Vd = 5.15 m/sec (1 200 rpm), t = 48 °C, pH = 7.3,
regeneration time (τ) 5 minutes. The results (Figure 4)
indicate that the highest degree of regeneration is
obtained at W = 200-250 m^3/m^3hour. The influence of the
Card2/3   reaction temperature was tested under the following

SOV/68-59-1-10/26

Intensification of the Process of Regeneration of a Sodium-
arsenical Solution Under Highly Turbulent Conditions

conditions: $Vd = 5.15$ m/sec (1 200 rpm), $W = 200$ m^3/m^3hour, $pH = 7.3$, $\tau = 5$ minutes. The temperature range 20-60 ^{o}C was studied. The results obtained (Figure 5) indicated that the highest rate of regeneration is obtained at 48 - 55 ^{o}C. In addition, the influence of the degree of turbulency on the side reaction of formation of $Na_2S_2O_3$ was tested. The results (Figure 6) indicated that there is no relationship; the amount of thiosulphate formed remained constant. It is concluded that an intensive increase in the degree of turbulence in the regeneration system sharply increases the velocity of the regeneration, due to which capital expenditure on the plant and consumption of electric power for its operation can be considerably decreased. There are 6 figures.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut
(Dnepropetrovsk Chemico-technological Institute)

Card 3/3

5(1)

AUTHORS: Ganz, S. N., Lokshin, M. A.   SOV/153-2-4-31/32

TITLE: A Critical Equation of the Mass Exchange in Horizontal Mechanical Absorbers

ABSTRACT: The mass-exchange processes take place under highly turbulent conditions under the effect of numerous physicochemical and hydrodynamic factors. The use of the similarity method proved to be most convenient in the investigation of the combined effect of these factors on the process rate (Refs 5-8). The authors investigated the kinetics of the processes mentioned in horizontal mechanical mono- and polysection absorbers (Refs 1-4). Equation (1), and this functional dependence, respectively; determine the rate of the exchange mentioned in these apparatus. The required functional dependence of the Kirpichev diffusion criterion on the determining factors is expressed by equation (2). This critical equation sufficiently describes the adsorption process in mechanical absorbers with a high number of revolutions. There are 5 figures, 1 table, and 10 Soviet references.

Card 1/2

A Critical Equation of the Mass Exchange in Horizontal Mechanical Absorbers

SOV/153-2-4-31/32

ASSOCIACTION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut; Kafedra oborudovaniya khimicheskikh zavodov (Dnepropetrovsk Institute of Chemical Technology; Chair of Machinery for Chemical Factories)

SUBMITTED: June 28, 1958

Card 2/2

GANZ, S.N.; VILESOV, G.I.; LOPATIN, L.V.

Carbon ammoniates, a new type of economical fertilizers. Izv.vys. ucheb.zav.; khim.i khim.tekh. 2 no.6:913-915 '59. (MIRA 13:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut. Kafedra oborudovaniya khimicheskikh zavodov.
          (Ammines)   (Fertilizers and manures)

5(2)

AUTHORS: Ganz, S.N., Vilesov, G.I., Gorman, S.I., Leybovich, S.B.

TITLE: The Combination of the Purification Process of a Nitrogen-Hydrogen Mixture From CO_2 With the Preparation of Ammonium Carbonates. Communication I.

ABSTRACT: The separate and combined absorption of NH_3 and CO_2 depending on the physical-chemical and hydrodynamic conditions of the process is investigated here. For this purpose horizontal rotary absorbers with high rpm were used /Refs 1-4/. At a temperature of 17-18°C and a pressure of 749 mm Hg, the absorption reaches 100% at 250 rpm. If the NH_3 supply is more than 500 m^3 per m^3 of absorbent · hr, the revolutions must be increased to 850-900 per min. Under highly turbulent conditions the productivity of the apparatus is 40-41 times greater than that of packed columns. The absorption of CO_2 by ammonia water at 18°C and a supply of 500 m^3/m^3·hr at a CO_2 content of 11.8% in the gas reaches its maximum of 98.5% at 2,000 rpm. An increase of the supply rate reduces the degree of absorption. A maximum of absorption is reached at a CO_2 content of 11% in the gas. The highest

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SOV/80-32-5-6/52

The Combination of the Purification Process of a Nitrogen-Hydrogen Mixture From CO_2 With the Preparation of Ammonium Carbonates. Communication I.

rate of the process can be attained at a stoichiometric $NH_3:CO_2$ ratio 1:1. The combined absorption of NH_3 and CO_2 differs only slightly from the separate absorption. The degree of absorption decreases with the increase of the ammonium carbonate concentration in the solution, which is explained by the higher viscosity of the solution and the higher vapor pressure of NH_3 and CO_2. An excess of ammonia shows the most favorable results in this case.
There are: 1 diagram, 10 graphs and 4 Soviet references.

SUBMITTED: September 12, 1957

Card 2/2

5(2)   SOV/80-32-5-7/52

AUTHORS: Ganz, S.N., Leybovich, S.B., Gorbman, S.I.

TITLE: The Investigation of the Rate of Conversion of $CaSO_4$ to $(NH_4)_2SO_4$
                in Combining This Process With the Absorption of NH_3 and CO_2 Under
                Highly Turbulent Conditions. Communication II.

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 975-978 (USSR)

ABSTRACT: A rational method of purifying a nitrogen-hydrogen mixture from CO_2
                is the combination of this process with the conversion of $CaSO_4$ to
                ammonium sulfate. Horizontal rotary apparatuses were used, in which
                intensive mixing of the gaseous and liquid phases increases the re-
                action rate. To a 116 g/l solution of $(NH_4)_2SO_4$ a finely ground
                powder of $CaSO_4 \cdot 2H_2O$ in the amount of 100 g was added. The con-
                version of gypsum attains 90-94% in a three-minute contact of the
                two phases at 400-500 rpm. For the absorption of CO_2 the gypsum
                suspension in the apparatus was saturated with ammonia to 8.4% NH_3.
                At 1,200 rpm, 27.5 - 28°C, 750 mm Hg, a gypsum content of 126 g/l
                and a CO_2 content of 10.6% in the gas, the absorption of CO_2 comes
                to an end in the 12th minute due to the complete consumption of
Card 1/2   gypsum and NH_3, if the supply rate is 250 m^3/m^3.hr. The absorption

SOV/80-32-5-7/52

The Investigation of the Rate of Conversion of $CaSO_4$ to $(NH_4)_2SO_4$ in Combining This Process With the Absorption of NH_3 and CO_2 Under Highly Turbulent Conditions. Communication II.

rate is increased with the supply rate. The concentrations of 64 g/l $CaSO_4$ and 57 g/l $(NH_4)_2SO_3$ ensure a maximum of the reaction rate. The optimum temperature lies between 28 and 38°C. There are: 3 graphs and 7 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemical-Technological Institute)

SUBMITTED: September 12, 1957

Card 2/2

5.1105

75664
SOV/80-32-10-13/51

AUTHORS: Ganz, S. N., Leybovich, S. B., Malyshevich, N. A.,
             Lokshin, M. A.

TITLE: Investigation of the Rate of CO_2 Absorption by a
             Monoethanolamine Solution in a Horizontal Mechanical
             Absorber

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10
             pp 2207-2210 (USSR)

ABSTRACT: This is a study of the dependence of the rate (R)
             of absorption and of the percentage of CO_2 absorbed
             (w) on the following factors: blade shaft rpm (n),
             gas volume flow rate (W), % CO_2 in gas (c_g), tem-
             perature(T), % monoethanolamine in the solution (c_L), and
             degrees of monoethanolamine saturation. Absorption
             rates were increased by use of horizontal high-rpm
             mechanical absorbers described earlier (Ganz, S. N.,
Card 1/6   ZhPKh, 30, 1604 (1957)). (1) Effect of shaft rpm.

Investigation of the Rate of CO_2 Absorption by

..Monoethanolamine Solution in a Horizontal
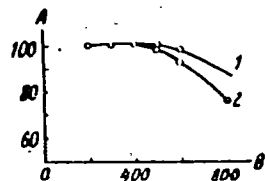Mechanical Absorber

75664

SOV/80-32-10-13/51

Conditions: W, 400 m^3/m^3 x hr; C_g, 20.3%; 32°;

752 mm Hg; C_L, 30%. Result: 100% absorption at

n = 500 rpm (circumferential speed (v) = 2 m/sec);
at n > 120 rpm, w and R decrease smoothly. The
effect of the gas volume flow rate is shown in Fig.
1. Figs. 2 and 3 show the effect of CO_2 concentration

at W = 400 m^3/m^3 x hr; n = 500 rpm; 31-32°; C_g =

30%; 758 mm Hg. Fig. 4 shows the effect of tem-
perature. The influence of monoethanolamine concentra-
tion and saturation is shown in Figs. 5 and 6, re-
spectively; at $C_L < 10$%, w < 90% owing to the low

reaction rate under these conditions. Taking into account
monoethanolamine losses by entrainment, optimum
C_L = 30-35%. Fig. 7 shows the superiority of mono-
ethanolamine over 20% potash solution. There are
7 figures; and 7 Soviet references.

Card 2/6

Investigation of the Rate of CO_2 Absorption by   75664

a Monoethanolamine Solution in a Horizontal   SOV/80-32-10-13/51

Mechanical Absorber

Fig. 1. w vs W: (A) w (%); (B)
W (m^3/m^3 x hr); n (rpm): (1)
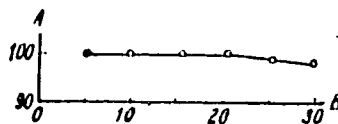800 to 900; (2) 500; T, 31°,
C_g, 19.4%.

Fig. 2. w vs C_g: (A) w (%);
(B) C_g (%).

Card 3/6

Investigation of the Rate of CO_2 Absorption   75664
a diethanolamine Solution in a Horizontal   SOV/80-32-10-13/51
Mechanical Absorber

Fig. 3. R vs C_g: (A) R (kg/m^3 x hr); (B) C_g (%).

Fig. 4. w vs sorbent temperature (T): (A) w (%); (B) T; P = 754 mm Hg, W = 400 m^3/m^3 x hr, n = 500 rpm, C_L = 30%, C_g = 18%.

Card 4/6

Investigation of the Rate of CO_2 Absorption by

a Monoethanolamine Solution in a Horizontal
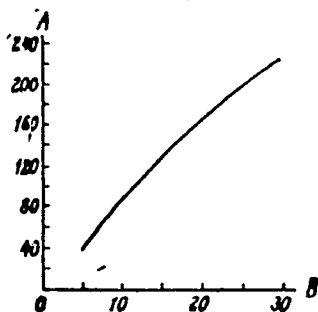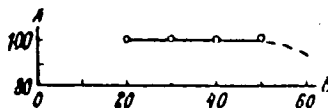
Mechanical Absorber

75664

SOV/80-32-10-13/51

Fig. 5. w vs C_L: (A) w (%);
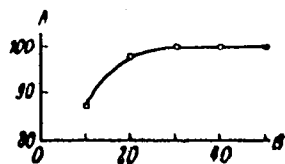
(B) C_L (%); w = 400 m^3/m^3 x

hr, n = 500 rpm, T = 37°,

C_g = 18.9%.
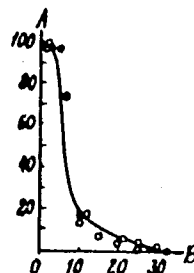
Fig. 6. w vs test duration:

(A) w (%); (B) test duration

(min); initial C_L = 30%, C_g

= 19%, n = 800 rpm, T = 22°,

W = 600 m^3/m^3 x hr.

Card 5/6

Investigation of the Rate of CO_2 Absorption by   75664
:. .:noethanolamine Solution in a Horizontal   SOV/80-32-10-13/51
Mechanical Absorber

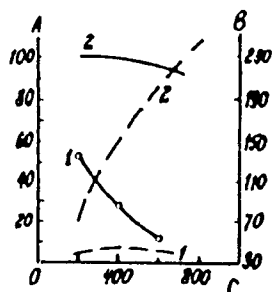Fig. 7. w, and rate of absorption by potash solution (R_p) and by monoethanolamine (R) vs W: (A) w (%); (B) R and R_p (kg/m^3 x hr); (C) W (m^3/m^3 x hr); Solid line w; dotted line: R and R_p; (1) potash, (2) monoethanolamine.

ASSOCIATION: :hep·opetrovsk Chemical Engineering Institute (:hepropetrovskiy :himiko-tekhnologicheskiy institut)

SUBMITTED: September 25, 1958

Card 6/6

GANZ, Semen Naumovich; Prinyali uchastiye: NEDOBACH, G.G.; TOPTUNENKO, Ye.T.;
LEYBOVICH, S.B.; BRAGINSKAYA, R.I.; DAL', V.I., doktor tekhn. nauk,prf.,
red.; NESTERENKO, A.S., red.; PLETENITSKIY, V.Yu., tekhn. red.

[Technological processes and equipment of the synthesis gas and
fixed nitrogen industries] Tekhnologicheskie protsessy i oborudo-
vanie proizvodstv sintez-gaza i sviazannogo azota. Pod red. V.I.
Dalia. Khar'kov, Izd-vo Khar'kovskogo gos. univ., im. A.M.Gor'kogo,
1960. 550 p.   (MIRA 14:8)
            (Gas manufacture and works)   (Nitrogen)

GANZ, S.N.

Efficient design of hollow towers in the manufacture of nitric
acid.   Trudy DKHTI no.10:51-59 '60.   (MIRA 14:1)
                        (Nitric acid)
          (Chemical engineering—Apparatus and supplies)

GANZ, S.N.

Automatic instrument for the continuous determination of nitrogen oxides in nitrose and in the gas and nitric acid of the mixture.
Trudy DKHTI no.10:131-137 '60.   (MIRA 14:1)
(Nitrogen acid)

GANZ, S.N.

Comparison of technological and economic indices of modern high-efficiency units for the absorption of nitrogen oxides. Trudy DKHTI no.10:139-146 '60.   (MIRA 14:1)

(Nitrogen oxide)

KUZNETSOV, I.Ye.; GANZ, S.N.

Improved design of a skip elevator.   Koks i khim. no.12:30-31 '60.
(MIRA 13:12)
1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Hoisting machinery)

GANZ, S.N.

Continuous method for producing ammonium carbonates. Zhur. prikl.
khim. 33 no.6:1251-1257 Je '60.   (MIRA 13:8)
                    (Ammonium carbonate)

GANZ, Semen Naumovich; KUZNETSOV, Ivan Yefimovich; PREDTECHENSKAYA, N.
[Predtechens'ka,N.], red.; SICHUGOV, V. [Sychuhov,V.], tekhn.
red.

[Furnaces for the chemical industry] Vypaliuval'ni pechi khimichnoi
promyslovosti. Kyiv, Derzh. vyd-vo tekhn. lit-ry URSR, 1961. 217 p.
(MIRA 14:10)

(Furnaces)

GANZ, S.N., kand.tekhn.nauk; KHOKHLOV, S.F., inzh.

Determination of the dimensions of centrifugal hollow towers with mutiple-disk sprayers. Khim.mash. no.2:31-33 Mr-Ap '61.

(MIRA 14:3)

(Chemical engineering—Equipment ans supplies)
(Absorption)

GANZ, S.N.

Increasing the absorption of nitrogen oxides from exhaust
gases by alkaline solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh.
4 no.6:998-1002 '61.
(MIRA 15:3)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni
Dzerzhinskogo, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxides)   (Absorption)

GANZ, S.N.; BRAGINSKAYA, R.I.; GORODETSKIY, N.I.; LOKSHIN, M.A.
Prinimali uchastiye: SLASHCHEVA, V.M.· MOLCHANOV, V.A.;
OVCHARENKO, B.G.

Absorption of nitrogen oxides by milk of lime in mechanical
absorbers of a pilot plant. Izv.vys.ucheb.zav.; khim.i khim.
tekh. 5 no.1:155-159 '62.
(MIRA 15:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni
F.E.Dzerzhinskogo, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxides)   (Lime)

GANZ, S.N.

Removal of dust from industrial waste gases in multiple disk
rotary separators. Izv.vys.ucheb.zav.;khim.i khim.tekh. 5 no.2:
326-330 '62.   (MIRA 15:8)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni
F.E.Dzerzhinskog), kafedra tekhnologii neorganicheskikh veshchestv.
                            (Dust collectors)

GANZ, S. N.

New types of nitrogen fertilizers. Zemledelie 24 no.9:39-40
S '62.   (MIRA 15:10)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

(Nitrogen fertilizers)

L 31814-65   EPA(s)-2/EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T   Pc-4/Pr-4/Ps-4/Pt-10   WW/RM
ACCESSION NR AM4044431   BOOK EXPLOITATION   S/

Ganz, Semen Naumovich; YEmel'yanov, Miney Stepanovich; Perkhomenko Vladimir
    Dmitriyevich

Plastics in instrument manufacture (Plastmassy v apparatostroyenii), Kharkov,
    Izd-vo Khar'kovskogo univ., 1963, 198 p. illus., biblio. Errata slip
    inserted. 7,000 copies printed.

TOPIC TAGS: polyethylene, polyisobutylene, polystyrene, fluoropolymer, glass
fiber reinforced plastic, epoxy resin, phenolic resin, faolite, plastics
machining, plastics joining, protective coating, graphite filled plastic, pump,
fan, centrifuge, polyvinylchloride tube, corrosion resistance

PURPOSE AND COVERAGE: This book presents data on the physical-chemical properties
and corrosion resistance of construction plastics and the areas of their
application are indicated. Considering the properties of plastics, methods of
machining them, applying protective coatings on materials and certain problems
of fabricating equipment from plastics are included. The book is intended for
workers in the chemical, coke, petroleum, and other industries in which it is
necessary to protect equipment from aggressive media.

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L 31814-65
ACCESSION NR AM4044431

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TABLE OF CONTENTS [abridged]:

SUBMITTED: 15Nov63   SUB CODE: MT, OO

NO REF SOV: 046   OTHER: 004

Card 2/2

GANZ, S.N. [Hanz, S.N.]; PARKHOMENKO, V.B.

New antifriction and chemically stable materials. Khim.
prom. [Ukr.] no.4:20-24 O-D'63.   (MIRA 17:6)

GANZ, S.N.; KUZNETSOV, I.Ye.

Removal of hydrogen sulfide in hollow even-flow absorbers with a
centrifuge volumetric sprayer. Koks i khim. no.9:37-42 '63.
                                                      (MIRA 16:9)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
            (Coke-oven gas) (Hydrogen sulfide)

PARKHOMENKO, V.D., inzh.; GANZ, S.N., kand. tekhn. nauk

Effect of temperature on the friction and wear of filled
fluoroplastic materials. Izv. vys. ucheb. zav.; mashinostr.
no.9:130-133 '63.   (MIRA 17:3)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S.N., doktor tekhn. nauk; PARKHOMENKO, V.D.

Technology of the manufacture and testing of graphitized fluoroplast piston rings. Koks i khim. no.12:50-53 '63.   (MIRA 17:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S.N.; KUZNETSOV, I.Ye.

Rate of absorption of nitrogen oxides in a tubular equiflow tower equipped with a centrifugal volume atomizer. Trudy DKHTI no.16:3-15 '63.

Alkaline absorption of nitrogen oxides in a tubular equiflow tower equipped with a centrifugal volume atomizer. Ibid.:17-26

(MIRA 17:2)

GANZ, S.N.; LUK'YANITSA, A.I.

Thermal dissociation of FeSO$_4$ in suspension.   Izv.vys.ucheb.zav.;khim.i
khim.tekh. 6 no.5:811-815 '63.   (MIRA 16:12)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni
F.E.Dzerzhinskogo, kafedra tekhnologii neorganicheskikh veshchestv.

GANZ, S.[Hans, S.], doktor tekhn. nauk

"Foxtails" will disappear. Nauka i shyttia 12 no.2:10 F '63.
(MIRA 16:4)

(Ukraine—Fertilizer industry)

GANZ, S.N.; PARKHOMENKO, V.D.; PETRUNIN, Ye.P.

Device for study of the antifriction properties of materials
in corrosive media. Zav. lab. 29 no.6:763-764 '63.
(MIRA 16:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Testing machines)   (Friction materials)

GANZ, S.N.; KUZNETSOV, I.Ye.

Rate of absorption of nitrogen oxides in tubular towers with centrifugal volume sprayers. Zhur. prikl. khim. 36 no.8: 1686-1692 Ag '63.

Alkaline absorption of nitrogen oxides in a tubular tower with a centrifugal volume sprayer and evenly distributed flow.   1693-1697   (MIRA 16:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S. N.

"Mass transfer with chemical changes under the conditions of highly turbulent flow."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Dnepropetrovsk Chemical-Technological Inst.

L 16328-65   EWG(j)/EWP(e)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(b)   Pc-4/Pr-4/
Ps-4   JD/WW/RM/WH
ACCESSION NR: AP4049183   S/0314/64/000/005/0039/0039

AUTHOR: Ganz, S. N., (Candidate of technical sciences), Glozman, L.P., (Parkhomenko,
V. D., Morgun, V.S., (Engineers)

TITLE: Application of packings made of impregnated fluoroplasts in oxygen compressors

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 5, 1964, 39

TOPIC TAGS: packing, fluoroplast packing, carbon impregnated fluoroplast, oxygen
compressor

ABSTRACT: In 3RK 10/30 double-action compressors, the required tightness was not
provided by graphite-impregnated asbestos or pure fluoroplast-4. A new composition
consisting of fluoroplast-4 with 18% colloidal graphite was therefore worked out by the
Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemical-
Technological Institute). The plunger packing consists of internal fluoroplast rings;
a gasket of the same material prevents gas flow from the packing box to the plunger,
and pressure is ensured by the oxygen in the machine. The water is supplied in the
same way as for the old packing. The first stage packing does not have a duct for the
water supply, which is available for the second stage. The compressor reached a

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L 16328-65
ACCESSION NR: AP4049183

capacity of 600 m^3/hr. with the new packing. Tests were made with oxygen at a deli-
very temperature of 70C, sliding speed of 3.75 m/sec, first stage suction pressure of
1.35 and second stage pressure of 7 atm, the delivery pressure being 7 and 30 atm.
respectively. Gas leakage did not exceed 5 m^3/hr. The service life of the new packing
is 2,000 hours. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MT, IE

NO REF SOV: 000   OTHER: 000

Card 2/2

L 8411-65   EWT(m)/EPF(c)/K/EPR/EWP(j)/T/EWP(q)/EWP(b)   Pc-4/Pr-4/Ps-4   ASD(m)-3

RM/WH/WW/DJ

ACCESSION NR: AP4043324   S/0191/64/000/008/0328/0031

AUTHOR: Ganz, S. N.; Parkhomenko, V. D.   B

TITLE: Physicomechanical antifriction properties of teflon materials

SOURCE: Plasticheskiye massy*, no. 8, 1964, 28-31

TOPIC TAGS: polytetrafluoroethylene, teflon, filled teflon, molyb-
denum disulfide filled teflon, boron nitride filled teflon, barium
sulfate filled teflon, ground coke filled teflon, channel black filled
teflon, graphite filled teflon, aluminum oxide filled teflon, anti-
friction composition, antifriction material, teflon wear resistance,
self lubricating antifriction material

ABSTRACT: To improve the physicomechanical properties of brand "B"
teflon, a self-lubricating antifriction material, the antifriction
and other physical and mechanical properties of filled teflon were
investigated with the following fillers added to it in quantities
of 10 to 45%: molybdenum disulfide (1), boron nitride (2), barium
sulfate (3), ground coke (4), channel black (5), type C-1 colloidal

Card 1/3

L 8411-65
ACCESSION NR: AP4043324

graphite (6), and anhydrous aluminum oxide (7). The materials were molded into parallelepipeds and their wear resistance, impact strength, bending strength, hardness, creep at low temperatures, and water and acid absorption were tested. To obtain a homogeneous mixture, the components were mixed in a colloidal grinder. The wear resistance of all samples increased considerably. Fillers 6, 4, 1, and 2 were the most effective and 7 and 3 the least effective. The hardness of teflon materials with 15—25% filler increased 1.5—1.8 times. Hardness decreased sharply when filler content exceeded 25%. Maximum hardness was obtained with fillers 6, 3, and 2, while fillers 5, 4, and 1 were the least effective. Water and acid absorption by the material was greatest with fillers 7 and 4; no significant changes were observed with the others. Increased acid concentration resulted in greater absorption of materials. The impact strength of the materials decreased with the introduction of fillers. The most noticeable change occurred with fillers 6, 5, 7, and 4. The introduction of fillers 3, 1, and 2 up to 15% did not affect the materials; with content greater than 15% the impact strength decreased sharply. The bending strength decreased with the introduction of 15—20% of

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L 8411-65
ACCESSION NR: AP4043324   0

fillers 6, 5, 2, and 3. In all cases an increase in filler content
resulted in reduced strength. Orig. art. has: 7 tables.

ASSOCIATION: None

SUBMITTED: 00   ATD PRESS: 3101   ENCL: 00

SUB CODE: MT, FP   NO REF SOV: 000   OTHER: 000

Card 3/3

L 14353-65   EWG(j)/EWP(e)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(b)   Pc-4/Pr-4/Ps-4
ACCESSION NR: AP4048209BSD/ASD(m)-3/AS(mp)-2   S/0191/64/000/011/0037/0039
                              WW/RM/WH

AUTHOR: Ganz, S. N.; Parkhomenko, V. D.

TITLE: A study of the deformation of filled fluoroplast materials

SOURCE: Plasticheskiye massy*, no. 11, 1964, 37-39

TOPIC TAGS: fluoroplast, molybdenum disulfide, boron nitride, talc, graphite,
aluminum oxide, fluoroplast filler, fluoroplast creep, plastic creep/Fluoroplast-4

ABSTRACT: The creep of filled fluoroplasts (samples 20 mm in length and 10 mm in
diameter) was determined by an accelerated method on a special apparatus, which is
described and illustrated. In addition to powdered fluoroplast-4 type B, the following
materials were used as fillers: molybdenum disulfide, boron nitride, ground coke, talc,
colloidal graphite and anhydrous aluminum oxide. The filler content of the fluoroplast
ranged from 10 to 45%. A study of the relative deformation with time under an instantane-
ous tensile stress of 75 kg/cm^2 at 18-20C showed that, depending on its nature, the filler
decreases the creep of fluoroplast-4 considerably, but that the character of the relative
deformation vs. time curves remains analogous for all compositions. After 20-25 hrs.,
the deformation of the samples varied only slightly. A plot of the relative deformation at

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L 14353-65
ACCESSION NR: AP4048209

100 hrs. and 75 kg/cm^2 against the amount and type of filler shows that the minimum creep is found at a 25-40% filler content. A further increase in the filler content decreases the mechanical strength of the material and leads to its failure. The deformation data are tabulated in detail for graphite-filled fluoroplast. With increasing temperature, the deformation of the samples increases. The sample containing 20% colloidal graphite shows a sharp increase in relative deformation up to 95°C and higher, with increasing time. Since this combination shows the minimum deformation at all temperatures, it is suitable for a study of the quantitative relationships between deformation, compression, filler content and time. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 00   ENCL: 00   SUB CODE: MT

NO REF SOV: 002   OTHER: 000

Card   2/2

...purification of fuel gases by the removal of nitrogen oxides
by means of flaked lime peat with the production of peat
nitrogenous fertilizers. Izv. vys. ucheb. zav.; Khim. i khim.
... ... '...

... ...

GAY, S.L.; PANCHENKO, A.V.; BLAGONRAVA, N.I.

Vapor pressure over liquid ammonium carbonate fertilizers. Izv. vys. ucheb. zav.; Khim. i khim. tekh. 7 no.4:619-622 '64.
(MIRA 17:12)

1. Kafedra tekhnologii neorganicheskikh veshchestv Dnepropetrovskogo khimiko-tekhnologicheskogo instituta im. F.E. Dzerzhinskogo.

GANZ, S.N.; LUK'YANITSA, A.I.; SEREBRYANYY, Ya.A.

Intensifying the process of neutralizing pickling solutions
and acid washing waters. Stal' 23 no. 3:282-283 Mr '64.
(MIRA 17:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S.N.; LITVINENKO, A.I.; BEL'CHINA, L.A.

Production of nitrogeneous-ferrous fertilizers from pickling solution wastes. Zhur.prikl.khim. 37 no.7:1406-1409 Jl '64.

Simultaneous production of nitrogeneous-ferrous fertilizers and purification of gases by the removal of nitrogen oxides. Ibid.:1609-1611
(MIRA 18:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S.N.; PARKHOMENKO, V.D.

    Antifriction properties of fluoroplast-4 filled with ground coke.
    Plast. massy no.1:40-41 '65.   (MIRA 18:4)

L 40997-65   EWT(m)/EPF(o)/EPR/EWP(j)/T   Pc-4/Pr-4/Ps-4   WW/RM

ACCESSION NR: AP5006560   S/0191/65/000/003/0036/0038

AUTHOR: Ganz, S. N.; Parkhomenko, V. D.

TITLE: Shrinkage of filled 4-polyfluoroethylene resin (Teflon)

SOURCE: Plasticheskiye massy, no. 3, 1965, 36-38

TOPIC TAGS: filled resin, polyfluoroethylene resin, filled fluoroplast, resin shrinkage, graphitized resin / Teflon polymer

ABSTRACT: The article gives tabulated shrinkage values for graphitized Teflon (fluoroplast-4) compressed at 300-320 kg/cm^2 for 2-3 min at a motion rate of 6-7 cm/min. The material was caked at 360-380C, raising the temperature by 75C an hour, for 2 to 6 hrs depending on the size of the object, and cooled for 1.5-2 hrs, down to 150C in the oven and then in air to obtain "nonhardened" products. Tabulated data show that shrinkage across both outer and inner diameters is greater in larger tubular pieces and is less in pieces provided with metallic fixtures or cooled in molds. A diagram of shrinkage vs object diameter is plotted (see Fig. 1 of the Enclosure) which indicates that shrinkage is low (0.8-1.2%) and increases slowly in pieces with diameters up to 40 mm, but climbs sharply in pieces 45-80 mm

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L 40997-65
ACCESSION NR: AP5006560

in diameter, and increases almost linearly in pieces 80-300 mm in diameter. The empirical expression $G = 20.595 - \dfrac{29.945}{\lg D}$, where G is the shrinkage in % and D is a coefficient numerically equal to the object diameter in mm, was used for the calculations. Orig. art. has: 3 tables, 1 figure and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00   ENCL: 01   SUB CODE: MT

NO REF SOV: 002   OTHER: 000

Card   2/3

L 54845-65   EWT(m)/EPF(c)/EPR/EWP(j)/T   Pc-4/Pr-4/Ps-4   WW/RM
ACCESSION NR: AP5016883   UR/0374/65/000/003/0057/0062
                                                    678:539.376

AUTHOR: Ganz, S. N. (Dnepropetrovsk); Parkhomenko, V. D. (Dnepropetrovsk)

TITLE: Equations for determining the deformation of filled fluorocarbon plastic materials

SOURCE: Mekhanika polimerov, no. 3, 1965, 57-62

TOPIC TAGS: ftoroplast 4, polytetrafluoroethylene, Teflon, colloidal graphite, filled Teflon, Teflon deformation

ABSTRACT: An earlier study (Ganz, S. N., and V. D. Parkhomenko. Plasticheskiye massy, no. 11, 1964) showed that the addition of fillers sharply lowers the deformability of fluorocarbon materials, in particular, that of ftoroplast-4 (polytetrafluoroethylene, Teflon) filled with 17—30% S-1 colloidal graphite (I). In the present study, deformation of I was investigated experimentally. Equations were derived from data which make it possible to calculate the deformation of filled fluorocarbon plastic materials from the filler content, compressive stress, and testing time. The equations hold true for stresses below 200 kg/cm². Orig. art. has: 6 figures.   [BO]

Card 1/2

L 54845-65
ACCESSION NR: AP5016883

ASSOCIATION: none

SUBMITTED: 28Oct54

NO REF SOV: 001

ENCL: 00

OTHER: 000

SUB CODE: MT

ATD PRESS: 4031

Card 2/2

L 61704-65   EWG(j)/EFF(c)/EPR/EWP(j)/EWP(z)/EWT(m)/EWP(i)/T/EWP(b)/EWP(e)/EWP(w)/
EWA(d)/EWP(t)   Pc-4/Pr-4/Ps-4   RM/WH/WW/MJW/JD
ACCESSION NR: AP5015965   UR/0314/65/000/006/0030/0033
                                                   678.743:620.178.162

AUTHORS: Ganz, S. N. (Doctor of technical sciences); Parkhomenko, V. D. (Candidate
of technical sciences)

TITLE: Friction and abrasion testing of filled fluoroplastic-4 in agressive media

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 6, 1965, 30-33

TOPIC TAGS: plastic, fluoropolymer, plastic coating, friction, ductile material/ C 1
colloidal graphite, 1Kh18N9T steel, B fluoroplastic 4

ABSTRACT: Friction coefficients and wear of the "B" fluoroplastic-4 (filled with
molybdenum-disulfide, boron nitride, pure $BaSO_4$, ground coke, carbon black, talcum,
colloidal graphite C-1, and anhydrous aluminum oxide) were determined. Filler
contents varied from 10 to 45%. Technology of specimen preparation was described by
S. N. Ganz and V. D. Parkhomenko (Plasticheskiye massy, 1964, No. 6). Plastic
specimens were rubbed against steel 1Kh18N9T in nitric and sulfuric acids of differ-
ent concentrations in the testing device shown schematically in Fig. 1 on the
Enclosure. The loading part of the device consisted of a sleeve (1) containing a
spindle (2) with the rotating steel specimen (3); pressure was applied to the

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L 61704-65

ACCESSION NR: AP5015965

specimens through the lever system (7); velocity of the steel specimen rotation was varied by the multistep pulleys (8). The plastic specimen (4) was placed in the bath (5) filled with acid and standing on the thrust- and radial ball-bearings. Acid temperature was regulated by the heat exchanger (6) and was controlled by a thermometer. The measuring part consisted of an elastic plate with sensing elements of strain gauge (9), an amplifier (10) and an oscillograph (11). All measured results were tabulated. Maximum wear was shown by the fluoroplastic-4 without a filler; maximum resistance to sulfuric acid by the coke- and talcum-filled specimens; to nitric acid by those with molybdenum disulfide. Filled plastics gained weight by swelling during friction in acids as shown in Fig. 2 on the Enclosure. Orig. art. has: 5 tables and 2 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 02   SUB CODE: MT
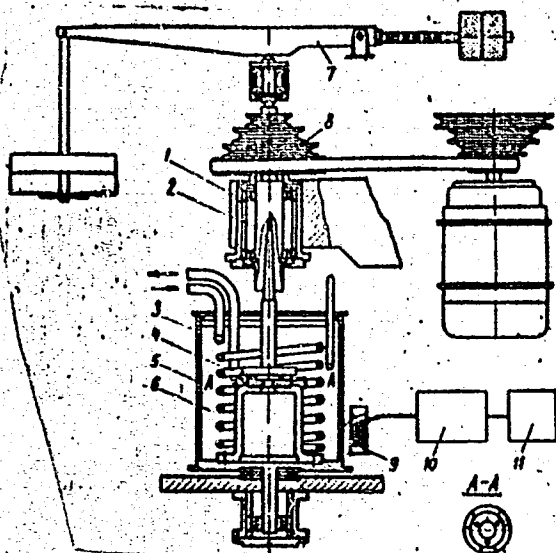
NO REF SOV: 002   OTHER: 000

Card 2/4

Fig. 1. Scheme for experimental testing device

L 61704-65

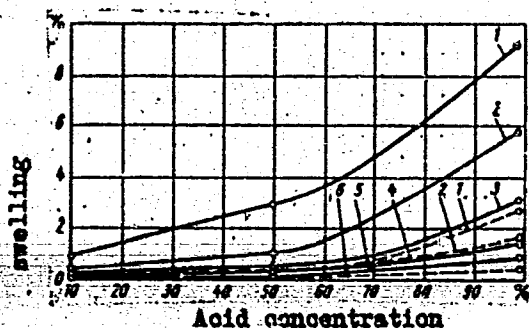ACCESSION NR: AP5015965

ENCLOSURE: 02

Fig. 2. Effect of acid concentration on swelling of fluoroplastic-4 with fillers: 1- ground coke (45%); 2- Al oxide (25%); 3- colloidal graphite (20%); 4- BaSO$_4$ (25%); 5- boron nitride (25%); 6- colloidal graphite (20%). _____ nitric acid; --------- sulfuric acid

Card 4/4

GANZ, S.N.; PARKHOMENKO, T.T.

Shrinkage of filled thermoplast. Plast. massy no.3:36-38 '65.
(MIRA 18:6)

L 6387-66

ACC NR: AP5026743   SOURCE CODE: UR/0286/65/000/017/0018/0018

INVENTOR: Ganz, S. N.; Kuznetsov, I. Ye.; Vilesov, G. I.; Dobrovol'skiy, Ye. I.;
Glozman, L. P.; Kuz', N. P.

ORG: none

TITLE: A method for reducing the tendency to caking in ammonium nitrate. Class 16,
No. 174195

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 18

TOPIC TAGS: fertilizer, ammonium compound, nitrate, manganese, zinc

ABSTRACT: This Author's Certificate introduces a method for reducing the tendency to
caking in ammonium nitrate by treating it with a powdered material. A more effec-
tive fertilizer is produced by using a charge containing manganese silt and waste from
white zinc shops.

UDC: 631.842.4

SUB CODE: GC/   SUBM DATE: 12Mar64/   ORIG REF: 000/   OTH REF: 000

Card 1/1

GANZ, S.N., KUZNETSOV, I.Ye.

Calculation of hollow antiflow towers equipped with centrifugal atomizers. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.1:151-154 '65.   (MIRA 18:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni Dzerzhinskogo, kafedra tekhnologii neorganicheskikh veshchestv.

GANZ, S.N.; NESTERENKO, I.P.; VILESOV, G.I.

Adsorption of nitrogen oxides by a peat-ammonia sorbent.
Zhur.prikl.khim. 38 no.9:1930-1935 S '65.
(MIRA 18:11)
1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

GANZ, S.N., doktor tekhn.nauk; PARKHOMENKO, V.D., kand.tekhn.nauk; GLOZMAN, L.F.,
Tian.,

Investigating the antifriction filled polyfluoroethylene materials.
Vest.mashinostr. 45 no.9:41-44 S '65.

(MIRA 18:10)

GANZ, S.N.; MOROZOV, V.S.; VASHKEVICH, A.M.

Preparation of nitric acid of higher concentration in a closed
circulation system. Zhur. prikl. khim. 38 no.5:961-966 My '65.
(MIRA 18:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

AUTHOR: Parkhomenko, V. D.; Ganz, S. N.; Golubenko, L. A.; Volodin, I. S.

ORG: Dnepropetrovsk Institute of Chemical Technology (Dnepropetrovskiy khimiko-tekhnologicheskiy institut)

TITLE: Linear expansion and thermal conductivity coefficients of fluoroplastic material

TOPIC TAGS: thermal conduction, thermal expansion, temperature coefficient, filler, linear expansion, fluoroplastic material

ABSTRACT: Expansion and thermal conductivity with $BaSO_4$, MoS_2, graphite, and coke used as fillers. It was shown that a very complex relationship exists between the linear expansion coefficient and the temperature, type and concentration of a filler. Generally, the increased film concentrations contribute toward lowering of the linear expansion coefficient. Thermal conductivity is determined by the filler.

Card 1/2

ACC NR: AT7004081

The increased concentration of the filler in the mixture usually increases the
thermal conductivity of the fluoroplastic material. Orig. art. has: 4 figures and
1 table.

[AM]

SUB CODE: 11/SUBM DATE: none/ORIG REF: 005/

Card   2/2

GANZ, Petar, Pukovnik dr.

Personal method for agar reconstitution. Voj. san. pregl., Beogr,
13 no.7-8: 562 July-Aug 56.

1. Vojnosanitetski zavod JNA--Sarajevo.
     (AGAR,
          appar. for reconstitution of used agar (Ser))

GANZ, Petar; ABSIC, Bogoljub; MILENKOVIC, Gruja; GIRT, E.; JOAVNOVIC, S.;
    BOSKOVIC, B., Vojnosanitetski zavod.

Control and evaluation of culture media. Voj. san. pregl., Beogr.
16 no.3:212-216 Mar 59.

1. Katedra farmaceutskih nauka Vojna bolnica Bakterioloska laboratori-
ja.
        (CULTURE MEDIA
            control & evaluation (Ser))

FRONEK, Arnost, MUDR.; GANZ, Vilem, MUDr.; HAMMER, Jan, MUDr.;
PISA, Zbynek, MUDr.; ZEMPLENYI, Tibor, MUDr.; za tech. spoluprace:
STEIDLOVE, Aloisie; VELATOVE, Anny

Skin resistance in ischemic heart disease. Vnitr. lek., Brno 1
no.5:333-339 May 55.

1. Ustav pro choroby obehu krevniho v Praze-Krci, reditel prof.
MUDR. Kl. Weber.
         (SKIN, physiology
             resist. in ischemic heart dis.)
         (HEART DISEASE
             ischemic, skin resist.)

GANZ, V.; HAMMER, J.; PILAR, J.; PISA, Z.; ZEMPLENYI, T.

Working test with ECG recording during physical effort.
Vnitr. lek., Brno 1 no.6:423-426 June 55.

1. Ustav pro choroby obehu krevniho, Praha, Krc, reditel
prof. Dr. Kl. Weber, Ustav pro choroby obehu krevniho,
Praha-Krc.
        (PHYSIOLOGY
            working test, ECG eff. of phys. effort.)
        (ELECTROCARDIOGRAPHY
            in working test, ef., of phys. effort.)
        (EXERCISES, effects
            phys. effort on ECG in working test.)

FRONEK, A.; GANZ, V.; HAMMER, J.; PISA, Z.; technickou spol ipraci:
VELATOVE, A.; STEDLOVE, A.

Skin temperature in persons with ischemic heart disease.
Vnitr. lek., Brno 1 no.6:435-437 June 55.

1. Ustav pro choroby obehu krevniho v Praze-Krci, relitel
prof. Dr. Kl. Weber.
(HEART DISEASE
ischemic, skin temperature.)
(SKIN, in various diseases
heart dis., ischemic, temperature measurement.)
(BODY TEMPERATURE
skin in ischemic heart dis.)

ZEMPLENYI, T.; GANZ, V.; PISA, Z.; technicke spoluprace: VELATOVE, A.

Relation of some U-wave changes to coronary artery diseases and
hypertension. Vnitr. lek., Brno 1 no.7:518-527 July 55.

1. Ustav pro choroby obehu krevniho v Praze-Krci, reditel
prof. MUDr. Kl. Weber. Ustav pro choroby obehu krevniho v
Praze-Krci, Budejovicka 800.
  (CORONARY DISEASES, diagnosis
   ECG, U wave changes.)
  (HYPERTENSION, complications
   coronary dis., ECG, U wave changes.)
  (ELECTROCARDIOGRAPHY, in various diseases
   coronary dis. alone & with hypertension.)

PISA, Z.; GANZ, V.; technickou spolupraci A. Velatove.

The cuff test. Vnitr. lek., Brno 1 no.7:531-533 July 55.

1. Ustav pro choroby obehu krevniho v Praze-Krci, reditel prof.
MUDr. Kl. Weber. Ustav pro choroby obehu krevniho Praha-Krc,
Budejovicka 800.
            (ANGINA PECTORIS, diagnosis
                cuff test.)

GANZ, V.; PISA, Z.; HAMMER, J.

Orthostatic electrocardiography following peroral admin. of
glucose. I. In hypertension. Vnitr. lek., Brno 1 no.11:827-
833 Nov 55.

1. Ustav pro choroby obehu krevniho v Praze-Krci, reditel
prof. MUDr. Klement Weber. Dr. G., Ustav pro choroby obehu
krevniho, Praha-Krc, Budejovicka 800.
        (HYPERTENSION, physiology,
            ECG, eff. of oral glucose in orthostatism.)
        (GLUCOSE, effects,
            on ECG in hypertension, oral admin. in orthostatism.)
        (ELECTROCARDIOGRAPHY, in various diseases,
            hypertension, eff. of oral glucose in orthostatism.)

GANŽ, VILEM

HAMMER, Jan; GANZ, Vilem

DH-ergotoxin in therapy of angina pectoris. Cas. lek. cesk. 44 no.10:257-260 4 Mar 55.

1. Ustav pro choroby obehu krevniho; red. prof. Dr. Kl. Weber.
  (ANGINA PECTORIS, therapy
    dihydrogenated ergot alkaloids)
  (ERGOT ALKALOIDS, ther. use
    dihydrogenate deriv. in angina pectoris)

CZECHOSLOVAKIA/Human and Animal Physiology - Blood. Blood   T-3
              Transfusion and Blood Substitutes.

Abs Jour   : Ref Zhur - Biol., No 18, 1958, 84056

Author   : Ganz, V., Fronek, A.
Inst   :
Title   : The Plasma's Kalium Content and Hemodynamic Changes after
             Rapid Blood Transfusions with Low Citrate Concentration
             and High Kalium Concentration in Plasma.

Orig Pub   : Casop. lekaru ceskych, 1957, 96, No 13, 381-385.

Abstract   : No abstract.

Card 1/1

GANZ, V .

Country : CZECHOSLOVAKIA   T
Category: Human and Animal Physiology. Blood. Blood
          Transfusions and Blood Substitutes

Abs Jour: RZhBiol., No 19, 1958, 88710

Author : Ganz, V.; Fronek, A.
Inst   : -
Title   : On the Problem of Toxicity of Citrated Blood

Orig Pub: Casop. lekaru ceskych, 1957, 96, No 35, 1105-1113

Abstract: About 30% of blood was withdrawn in dogs and was
          reinjected within 30 minutes with the addition of
          sodium citrate (I) in the experimental animals
          and heparin in the controls. The rate of the in-
          fusion was 6 ml/kg in one minute. Dogs which
          received blood with the addition of 0.76 g of I/

Card   : 1/3

                              T-26

GANZ, V.

Country : CZECHOSLOVAKIA   T
Category: Human and Animal Physiology. Blood. Blood
          Transfusions and Blood Substitutes

Abs Jour: RZhBiol., No 19, 1958, 88710

Author : Ganz, V.; Frenck, A..
Inst   : -
Title : On the Problem of Toxicity of Citrated Blood

Orig Pub: Casop. lekaru ceskych, 1957, 96, No 35, 1105-1113

Abstract: About 30% of blood was withdrawn in dogs and was
          reinjected within 30 minutes with the addition of
          sodium citrate (I) in the experimental animals
          and heparin in the controls. The rate of the in-
          fusion was 6 ml/kg in one minute. Dogs which
          received blood with the addition of 0.75 g of I/

Card   : 1/3

                              T-26

Country : CZECHOSLOVAKIA
Category: Human and Animal Physiology. Blood. Blood
Transfusions and Blood Substitutes

Abs Jour: RZhBiol., No 19, 1958, 88710

T

The elevation of venous pressure appeared as a
manifestation of heart failure caused by the
cardiotoxic action of I. The venous pressure
returned to normal within 5-10 minutes following
the conclusion of T. T of blood with the addi-
tion of 0.25 g of I to 100 ml of blood was free
of toxic manifestations. -- I.A. Froleva

Card   : 3/3

T-27

GANZ, V.; FRONEK, A.

Measurement of blood flow based on thermodilution. Cesk. fysiol. 7 no.5: 455-456 Sept 58.

1. Ustav pro choroby obehu krevniho, Praha.
        (BLOOD CIRCULATION, determination,
                thermodilution technic (Cz))

FRONEK, A.; GANZ, V.

Local thermodilution method of measuring minute volume and circulation rate in the peripheral vessels. Cesk. fysiol. 8 no.3:189 Apr 59.

1. Ustav pro choroby obehu krevniho Praha. Predneseno na III. fysiologickych dnech v Brne dne 13. 1. 1959.
(BLOOD VOLUME,
       minute volume, local thermodilution method of determ. (Cz))
(BLOOD CIRCULATION,
       rate, local thermodilution method of determ. (Cz))